

WATER DESALINATION ACT OF 1996

SEPTEMBER 16, 1996.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. YOUNG of Alaska, from the Committee on Resources,
submitted the following

R E P O R T

[To accompany S. 811]

[Including cost estimate of the Congressional Budget Office]

The Committee on Resources, to whom was referred the Act (S. 811) to authorize research into the desalinization and reclamation of water and authorize a program for States, cities, or qualifying agencies desiring to own and operate a water desalinization or reclamation facility to develop such facilities, and for other purposes, having considered the same, report favorably thereon with amendments and recommend that the Act as amended do pass.

The amendments are as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the “Water Desalination Act of 1996”.

SEC. 2. DEFINITIONS.

As used in this Act:

(1) DESALINATION OR DESALTING.—The terms “desalination” or “desalting” mean the use of any process or technique for the removal and, when feasible, adaptation to beneficial use, of organic and inorganic elements and compounds from saline or biologically impaired waters, by itself or in conjunction with other processes.

(2) SALINE WATER.—The term “saline water” means sea water, brackish water, and other mineralized or chemically impaired water.

(3) UNITED STATES.—The term “United States” means the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the territories and possessions of the United States.

(4) USABLE WATER.—The term “usable water” means water of a high quality suitable for environmental enhancement, agricultural, industrial, municipal, and other beneficial consumptive or nonconsumptive uses.

(5) SECRETARY.—The term “Secretary” means the Secretary of the Interior.

SEC. 3. AUTHORIZATION OF RESEARCH AND STUDIES.

(a) **IN GENERAL.**—In order to determine the most cost-effective and technologically efficient means by which usable water can be produced from saline water or water otherwise impaired or contaminated, the Secretary is authorized to award grants and to enter into contracts, to the extent provided in advance in appropriation Acts, to conduct, encourage, and assist in the financing of research to develop processes for converting saline water into water suitable for beneficial uses. Awards of research grants and contracts under this section shall be made on the basis of a competitive, merit-reviewed process. Research and study topics authorized by this section include—

- (1) investigating desalination processes;
- (2) ascertaining the optimum mix of investment and operating costs;
- (3) determining the best designs for different conditions of operation;
- (4) investigating methods of increasing the economic efficiency of desalination processes through dual-purpose co-facilities with other processes involving the use of water;
- (5) conducting or contracting for technical work, including the design, construction, and testing of pilot systems and test beds, to develop desalting processes and concepts; and
- (6) studying methods for the recovery of byproducts resulting from desalination to offset the costs of treatment and to reduce environmental impacts from those byproducts.

(b) **PROJECT RECOMMENDATIONS AND REPORTS TO THE CONGRESS.**—As soon as practicable and within three years after the date of enactment of this Act, the Secretary shall recommend to Congress desalination demonstration projects or full-scale desalination projects to carry out the purposes of this Act and to further evaluate and implement the results of research and studies conducted under the authority of this section. Recommendations for projects shall be accompanied by reports on the engineering and economic feasibility of proposed projects and their environmental impacts.

(c) **AUTHORITY TO ENGAGE OTHERS.**—In carrying out research and studies authorized in this section, the Secretary may engage the necessary personnel, industrial or engineering firms, Federal laboratories, water resources research and technology institutes, other facilities, and educational institutions suitable to conduct investigations and studies authorized under this section.

(d) **ALTERNATIVE TECHNOLOGIES.**—In carrying out the purposes of this Act, the Secretary shall ensure that at least three separate technologies are evaluated and demonstrated for the purposes of accomplishing desalination.

SEC. 4. DESALINATION DEMONSTRATION AND DEVELOPMENT.

(a) **IN GENERAL.**—In order to further demonstrate the feasibility of desalination processes investigated either independently or in research conducted pursuant to section 3, the Secretary shall administer and conduct a demonstration and development program for water desalination and related activities, including the following:

- (1) **DESALINATION PLANTS AND MODULES.**—Conduct or contract for technical work, including the design, construction, and testing of plants and modules to develop desalination processes and concepts.
- (2) **BYPRODUCTS.**—Study methods for the marketing of byproducts resulting from the desalting of water to offset the costs of treatment and to reduce environmental impacts of those byproducts.
- (3) **ECONOMIC SURVEYS.**—Conduct economic studies and surveys to determine present and prospective costs of producing water for beneficial purposes in various locations by desalination processes compared to other methods.

(b) **COOPERATIVE AGREEMENTS.**—Federal participation in desalination activities may be conducted through cooperative agreements, including cost-sharing agreements, with non-Federal public utilities and State and local governmental agencies and other entities, in order to develop recommendations for Federal participation in processes and plants utilizing desalting technologies for the production of water.

SEC. 5. AVAILABILITY OF INFORMATION.

All information from studies sponsored or funded under authority of this Act shall be considered public information.

SEC. 6. TECHNICAL AND ADMINISTRATIVE ASSISTANCE.

The Secretary may—

- (1) accept technical and administrative assistance from States and public or private agencies in connection with studies, surveys, location, construction, operation, and other work relating to the desalting of water, and

(2) enter into contracts or agreements stating the purposes for which the assistance is contributed and providing for the sharing of costs between the Secretary and any such agency.

SEC. 7. COST SHARING.

The Federal share of the cost of a research, study, or demonstration project or a desalination development project or activity carried out under this Act shall not exceed 50 percent of the total cost of the project or research or study activity. A Federal contribution in excess of 25 percent for a project carried out under this Act may not be made unless the Secretary determines that the project is not feasible without such increased Federal contribution. The Secretary shall prescribe appropriate procedures to implement the provisions of this section. Costs of operation, maintenance, repair, and rehabilitation of facilities funded under the authority of this Act shall be non-Federal responsibilities.

SEC. 8. AUTHORIZATION OF APPROPRIATIONS.

(a) SECTION 3.—There are authorized to be appropriated to carry out section 3 of this Act \$5,000,000 per year for fiscal years 1997 through 2002. Of these amounts, up to \$1,000,000 in each fiscal year may be awarded to institutions of higher education, including United States-Mexico binational research foundations and inter-university research programs established by the two countries, for research grants without any cost-sharing requirement.

(b) SECTION 4.—There are authorized to be appropriated to carry out section 4 of this Act \$25,000,000 for fiscal years 1997 through 2002.

Amend the title so as to read:

An Act to authorize the Secretary of the Interior to conduct studies regarding the desalination of water and water reuse, and for other purposes.

PURPOSE OF THE BILL

The purposes of S. 811 are to authorize the Secretary of the Interior to conduct studies regarding the desalination of water and water reuse, and to authorize a program for States, cities, or qualifying agencies desiring to own and operate a water desalination or reclamation facility to develop such facilities.

BACKGROUND AND NEED FOR LEGISLATION

This bill would renew federal research and development into desalination, which is the process of removing organic and inorganic elements and compounds from saline or biologically impaired waters to make it usable for beneficial consumptive or nonconsumptive uses. The federal government devoted significant resources to the research and development of desalination technology in the 1950s and 1960s.

Despite the increasing shortage of usable surface and ground water in many parts of the United States, there has been little federally-sponsored research and development of desalination technologies since the early 1980s. However, Section 1605 of Public Law 102-575, the Reclamation Projects Authorization and Adjustment Act of 1992, does authorize the Secretary of the Interior to conduct research and to construct, operate, and maintain cooperative demonstration projects for the development and demonstration of appropriate treatment technologies for the reclamation of naturally impaired ground and surface waters.

Additional assistance by the federal government for research to develop economically feasible alternatives in the desalination and reuse of saline or biologically impaired water would be provided under S. 811. Water desalination technologies could provide water of a quality suitable for environmental enhancement, agricultural,

industrial, municipal, and other beneficial consumptive or non-consumptive uses.

COMMITTEE ACTION

S. 811 was introduced on May 17, 1995, by Senator Paul Simon (D-IL), and passed the Senate on May 3, 1996. The bill was received in the House of Representatives and referred primarily to the Committee on Resources, and secondarily to the Committees on Science and Transportation and Infrastructure. Within the Committee on Resources, the bill was referred to the Subcommittee on Water and Power Resources. On August 1, 1996, the Subcommittee was discharged from further consideration of the bill and the Full Resources Committee met to consider S. 811. Congressman John Doolittle (R-CA) offered an amendment in the nature of a substitute to: (1) reduce the federal cost share to a maximum of 50 percent, with a justification required for any federal share exceeding 25 percent; (2) assign responsibility for the programs authorized by the Act to the Secretary of the Interior; (3) eliminate the provision for an international desalination conference; and (4) reduce the authorization for appropriations between fiscal years 1997 and 2002 to a total of \$55 million from \$75 million. Congressman George Miller (D-CA) offered an amendment to the Doolittle amendment to include United States-Mexico, binational foundations and interuniversity research programs established by the two countries among those eligible for grants without any cost-sharing requirement. The Miller amendment was adopted by voice vote, and the Doolittle amendment, as amended, was also adopted by voice vote. The bill as amended was then ordered favorably reported to the House of Representatives, by voice vote, in the presence of a quorum.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

This Act may be cited as the “Water Desalination Act of 1996.”

Section 2. Definitions

This section defines “desalination or desalting,” “saline water,” “usable water,” “United States,” and “Secretary.” Desalination or desalting is defined to mean the use of any process or technique for the removal and, when feasible, adaptation to beneficial use, of organic and inorganic elements and compounds from saline or biologically impaired waters, by itself or in conjunction with other processes. Saline water is defined as sea water, brackish water, and other mineralized or chemically impaired water. Usable water is defined as water of a high quality suitable for environmental enhancement, agricultural, industrial, municipal, and other beneficial consumptive or nonconsumptive uses.

Section 3. Authorization of research and studies

This section authorizes the Secretary of the Interior to award grants and enter into contracts to conduct, encourage, and assist in the financing of research to develop processes for converting saline water into water suitable for beneficial use. Grants and contracts

would be made on the basis of a competitive, merit-reviewed process. Specific topics of research and study are identified in this section.

This section requires the Secretary to recommend to Congress desalination demonstration projects or full-scale desalination projects that have proven successful, so that they can be further evaluated and implemented. Recommendations will be accompanied by reports on the engineering and economic feasibility of the projects and their environmental impacts.

In implementing and evaluating these activities, the Secretary is authorized to engage the necessary personnel, industrial or engineering firms, federal laboratories, water resources research and technology institutes, other facilities, and educational institutions suitable to conduct investigations under this section.

This section further requires the Secretary to ensure that at least three separate technologies are evaluated and demonstrated for the purposes of accomplishing desalination.

Section 4. Desalination demonstration and development

This section authorizes the Secretary of the Interior to administer and conduct a demonstration and development program for water desalination and related activities, including plants and modules to develop desalination processes and concepts; studies of methods for the marketing of byproducts resulting from the desalting of water; and economic studies and surveys to determine costs of producing water in various locations by desalination processes compared to other methods.

This section states that federal participation in desalination activities may be conducted through cooperative agreements. This includes cost sharing agreements with non-federal public utilities and State and local government agencies and other entities, to develop recommendations for federal participation in processes and plants utilizing desalting technologies for the production of water.

Section 5. Availability of information

This section stipulates that all information from studies sponsored or funded under authority of the Act shall be considered public information.

Section 6. Technical and administrative assistance

This section authorizes the Secretary of the Interior to accept technical and administrative assistance from States and public or private agencies in connection with the desalting of water. The Secretary is authorized to enter into contracts or agreements stating the purposes for which the assistance is contributed and providing for the sharing of costs between the Secretary and any such agency.

Section 7. Cost sharing

This section states that the federal share of the cost of activities authorized by this Act shall not exceed 50 percent of the total cost. A federal contribution in excess of 25 percent of the cost of a project may not be made unless the Secretary of the Interior determines that the project is not feasible without such increased fed-

eral obligation. The Secretary is directed to prescribe procedures to implement the provisions of this section. The costs of operation, maintenance, and rehabilitation of facilities funded under the authority of this Act shall be entirely non-federal.

Section 8. Authorization of appropriations

This section authorizes an appropriation of \$5,000,000 per year for fiscal years 1997 through 2002. Up to \$1,000,000 may be awarded each fiscal year to institutions of higher education, including United States-Mexico, binational research foundations and interuniversity research programs established by the two countries, for research grants without any costsharing requirement.

This section also authorizes an appropriation of \$25,000,000 for fiscal years 1997 through 2002 to carry out section 4 of the Act.

COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

With respect to the requirements of clause 2(l)(3) of rule XI of the Rules of the House of Representatives, and clause 2(b)(1) of rule X of the Rules of the House of Representatives, the Committee on Resources' oversight findings and recommendations are reflected in the body of this report.

INFLATIONARY IMPACT STATEMENT

Pursuant to clause 2(l)(4) of rule XI of the Rules of the House of Representatives, the Committee estimates that the enactment of S. 811 will have no significant inflationary impact on prices and costs in the operation of the national economy.

COST OF THE LEGISLATION

Clause 7(a) of rule XIII of the Rules of the House of Representatives requires an estimate and a comparison by the Committee of the costs which would be incurred in carrying out S. 811. However, clause 7(d) of that Rule provides that this requirement does not apply when the Committee has included in its report a timely submitted cost estimate of the bill prepared by the Director of the Congressional Budget Office under section 403 of the Congressional Budget Act of 1974.

COMPLIANCE WITH HOUSE RULE XI

1. With respect to the requirement of clause 2(l)(3)(B) of rule XI of the Rules of the House of Representatives and section 308(a) of the Congressional Budget Act of 1974, S. 811 does not contain any new credit authority, or an increase or decrease in revenues or tax expenditures. Additional discretionary spending authority is provided, as described in the Congressional Budget Office report, below.

2. With respect to the requirement of clause 2(l)(3)(D) of rule XI of the Rules of the House of Representatives, the Committee has received no report of oversight findings and recommendations from the Committee on Government Reform and Oversight on the subject of S. 811.

3. With respect to the requirement of clause 2(l)(3)(C) of rule XI of the Rules of the House of Representatives and section 403 of the

Congressional Budget Act of 1974, the Committee has received the following cost estimate for S. 811 from the Director of the Congressional Budget Office.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, August 7, 1996.

Hon. DON YOUNG,
*Chairman, Committee on Resources,
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congress Budget Office has prepared the enclosed cost estimate for S. 811, the Water Desalination Research and Development Act of 1996.

Enacting S. 811 would not affect direct spending or receipts; therefore, pay-as-you-go procedures would not apply.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

JAMES L. BLUM
(For June E. O'Neill, Director).

Enclosure.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: S. 811.
2. Bill title: Water Desalination Act of 1996.
3. Bill status: As ordered reported by the House Committee on Resources on August 1, 1996.
4. Bill purpose: S. 811 would authorize the Secretary of the Interior to award grants and enter into contracts to finance research into methods for converting saline water into usable water and to administer a desalination program in coordination with nonfederal entities. To conduct these activities, the legislation would authorize the appropriation of \$55 million over the 1997–2002 period.
- The federal share of the cost of a research, study, or demonstration project under the program could not exceed 50 percent of the total cost of the project, except that a certain amount each year may be awarded to educational institutions for research grants without any cost-sharing requirement. Nonfederal cost-sharing partners would be responsible for operating and maintaining facilities funded under the authority of S. 811.
5. Estimated cost to the Federal Government: Assuming appropriation of the authorized amounts, CBO estimates that enacting S. 811 would result in new discretionary spending totaling \$50 million over the 1997–2002 period and \$5 million in 2003. There is no funding under current law for the programs that would be authorized by S. 811.

[By fiscal years, in millions of dollars]

	1997	1998	1999	2000	2001	2002
SPENDING SUBJECT TO APPROPRIATION						
Estimated authorization level	9	9	9	9	9	9
Estimated outlays	5	9	9	9	9	9

The costs of this legislation fall within budget function 300.

6. Basis of estimate: CBO assumes that total funding under S. 811 would average roughly \$9 million a year for each of fiscal years 1997 through 2002: \$5 million a year, as specified for research and development activities, plus approximately \$4 million a year of the \$25 million total that is specified for the water desalination program. Outlays are estimated based on historical spending rates for similar programs.

7. Pay-as-you-go considerations: None.

8. Estimated impact on State, local, and tribal governments: S. 811 contains no intergovernmental mandates as defined in the Unfunded Mandates Reform Act of 1995 (Public Law 104-4) and would impose no costs on state, local, or tribal governments. State and local entities that apply for and receive grants under this program generally would be required to pay at least 50 percent of the cost of research, study, demonstration, and desalination development projects. Water agencies, including such state and local entities, would be required to pay all the costs of operating, maintaining, and repairing facilities funded under this act. Up to \$1 million per year of the amounts authorized for research could be awarded to institutions of higher education with no required match.

Assuming that appropriations total \$55 million over the 1997-2002 period, and that the maximum amount is used for university research grants, nonfederal participants in these projects would contribute at least \$25 million in matching funds over the period. These participants would be primarily state and local governments and water agencies.

9. Estimated impact on the private sector: This legislation would impose no new private-sector mandates as defined in Public Law 104-4.

10. Previous CBO estimate: On April 17, 1996, CBO provided an estimate for S. 811, as ordered reported by the Senate Committee on Environment and Public Works on March 28, 1996. The two estimates reflect differences in the two versions of the legislation.

11. Estimate prepared by: Federal Cost Estimate: Gary Brown; Impact on State, Local, and Tribal Governments: Marjorie Miller; Impact on the Private Sector: Amy Downs.

12. Estimate approved by: Robert A. Sunshine (for Paul N. Van de Water, Assistant Director for Budget Analysis).

COMPLIANCE WITH PUBLIC LAW 104-4

S. 811 contains no unfunded mandates.

CHANGES IN EXISTING LAW

If enacted, S. 811 would make no changes in existing law.